

Claims:

1. A method for enhancing bone formation in a mammal in
5 need thereof comprising administering to said mammal an
effective amount of a lanthanum (III) compound.
2. A method according to claim 1 wherein the mammal is a
10 human.
3. A method according to claim 2 wherein the human has a
bone deficit or is at risk of developing a bone deficit.
4. A method according to claim 3 wherein the human has a
15 bone remodelling disorder or is at risk of developing
such disorder.
5. A method according to claim 4 wherein the bone
20 remodelling disorder is selected from the group
consisting of osteoporosis, Paget's disease,
osteoarthritis, rheumatoid arthritis, achondroplasia,
osteochondrytis, hyperparathyroidism, osteogenesis
imperfecta, congenital hypophosphatasia, fibromatous
25 lesions, fibrous dysplasia, multiple myeloma, abnormal
bone turnover, osteolytic bone disease, rickets,
osteomalacia and periodontal disease.
6. A method according to claim 4 wherein the bone
remodeling disorder is osteoporosis.
- 30 7. A method according to claim 6 wherein osteoporosis is
any one of primary osteoporosis, secondary osteoporosis,
post-menopausal osteoporosis, male osteoporosis and
steroid induced osteoporosis.
- 35 8. A method according to claim 3 wherein the human has a
bone fracture, bone trauma, or a condition associated

with post-traumatic bone surgery, post-prosthetic joint surgery, post-plastic bone surgery, post-dental surgery, bone chemotherapy treatment or bone radiotherapy treatment.

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9. A method according to claim 2 wherein the lanthanum (III) compound is selected from the group consisting of lanthanum chloride, lanthanum carbonate, lanthanum salts, chelates and derivatives thereof, lanthanum resins and lanthanum absorbants.
10. A method according to claim 9 wherein lanthanum (III) compound is selected from the group consisting of lanthanum carbonate and lanthanum chloride.
11. A method according to claim 2 wherein the effective amount of lanthanum (III) compound is from 0.05 mg/Kg/Day to 50 mg/Kg/Day.
12. A method according to claim 11 wherein the effective amount of lanthanum (III) compound is from 0.1 mg/Kg/Day to 10 mg/Kg/Day.
13. A method for increasing bone density in a mammal in need thereof comprising administering to said mammal an effective amount of a lanthanum (III) compound.
14. A method for stimulating osteoblast differentiation comprising contacting said osteoblasts with an effective amount of lanthanum (III) compound thereby stimulating differentiation.
15. A method for inhibiting osteoclast differentiation comprising contacting said osteoclasts with an effective amount of lanthanum (III) compound thereby inhibiting differentiation.

16. A method for activating bone formation activity of differentiated osteoblasts comprising contacting said osteoblasts with an effective amount of lanthanum (III) compound thereby stimulating bone formation.
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17. A method for simultaneously stimulating osteoblast differentiation and inhibiting osteoclast differentiation in a mammal having a bone remodeling disorder, or being at risk of developing a bone remodeling disorder, which comprises administering to
10 said mammal an effective amount of a lanthanum (III) compound.
18. A method for enhancing bone formation in a mammal in need thereof comprising administering to said mammal an effective amount of a lanthanum (III) compound and at least one bone enhancing agent.
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19. A method according to claim 18 wherein said bone enhancing agent is selected from the group consisting of a synthetic hormone, a natural hormone, oestrogen, calcitonin, tamoxifen, a biphosphonate, a biphosphonate analog, vitamin D, a vitamin D analog, a mineral supplement, a statin drug, a selective oestrogen
20 receptor modulator and sodium fluoride.
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20. Use of a lanthanum III compound for the preparation of a medicament for use in enhancing bone formation in a mammal in need thereof.
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21. A use as claimed in claim 20 wherein said mammal is a human having a bone remodelling disorder or being at risk of developing such disorder.
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22. A pharmaceutical composition for the treatment or prevention of a bone remodelling disorder comprising a lanthanum (III) compound and a bone enhancing agent.

23. A method for inhibiting osteoclastic differentiation
whereby to manage, treat or achieve prophylaxis of bone
disease which comprises administering to a human or
5 animal subject suffering from, or susceptible to bone
disease a therapeutically or prophylactically effective
amount of a lanthanum compound.
24. A method for activating osteoblastic differentiation
10 whereby to manage, treat or achieve prophylaxis of bone
disease which comprises administering to a human or
animal subject suffering from, or susceptible to bone
disease a therapeutically or prophylactically effective
amount of a lanthanum compound. and optionally
15 activating osteoblastic differentiation.
25. Use of a lanthanum (III) compound in the method of any
one of claims 1 to 19 or 23 to 24.